

25 dB DC Pass

High Power Directional Tap

ZARC-25-252+

50Ω 100W 550 to 2500 MHz

The Big Deal

- High Power Handling, 100 W
- Excellent Mainline Loss, 0.25 dB typ.
- Very good VSWR, 1.15:1 typ.



CASE STYLE: AW1564

Product Overview

The ZARC-25-252+ high power directional tap is ideal for signal monitoring up to 100W RF signals in UHF and wireless telecommunications applications. The heavy-duty microstrip module is housed in a rugged aluminum alloy case, with anodized aluminum heat sink and gold-plated SMA connectors. Overall dimensions are 3.00" x 2.81" x 2.03" high.

Feature	Advantages
0.25 dB typ. mainline loss	Extremely low internal power dissipation, reducing mainline loss and internal temperature for high reliability
VSWR 1.15:1 typ.	Very good 50Ω impedance matching minimizes interference with signal integrity
DC Pass up to 2A	Suitable for applications using remote antenna control or other remote motorized requirements
100 W input maximum	High power capacity, combined with excellent insertion loss, supports operation in transmitters and base stations for GSM, CDMA, UMTS, or LTE systems, UHF broadcasting, fixed microwave, and 2.4 GHz wireless LAN applications

Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



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Connectors Model
SMA ZARC-25-252-S+

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

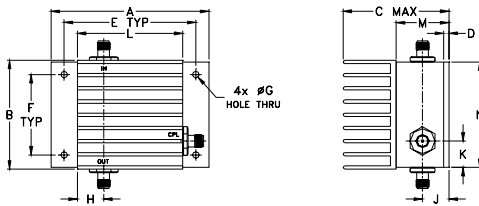
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input	100W max.
DC Current (IN-OUT)	2A
Permanent damage may occur if any of these limits are exceeded.	

Coaxial Connections

INPUT	1
OUTPUT	2
COUPLED	3

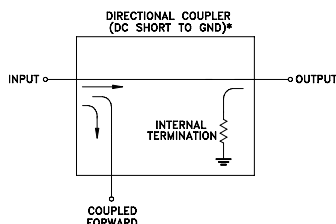
Outline Drawing



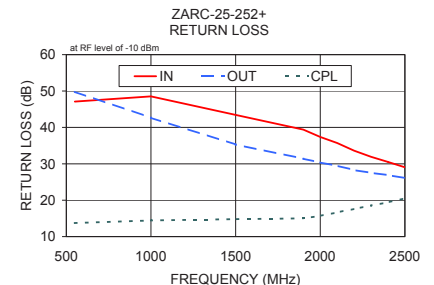
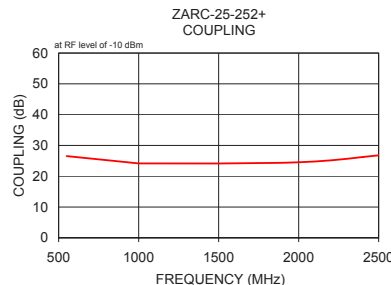
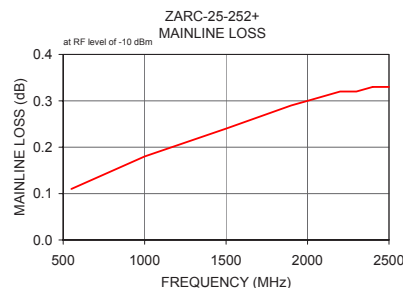
Outline Dimensions (inch mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	wt
3.00	2.06	2.03	.10	2.500	1.525	.125	.50	.50	.50	2.00	1.00	2.00	grams
76.20	52.32	51.56	2.54	63.50	38.74	3.18	12.70	12.70	12.70	50.80	25.40	50.80	230

Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMER(S) THAT ROUTES DC FROM RF PORTS TO GROUND.



Features

- excellent mainline loss, 0.25 dB typ.
- good VSWR, 1.15 typ.

Applications

- cellular
- PCS
- ISM

Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		550		2500	MHz
Mainline Loss (above theoretical 0.014 dB)	550	—	0.11	0.25	dB
	900	—	0.15	0.30	
	2200	—	0.30	0.45	
	2500	—	0.30	0.50	
	550 - 2500	—	25.0	—	
Coupling* (IN-CPL)	550	25.8	26.5	27.3	dB
	900	23.5	24.3	25.1	
	2200	23.7	25.0	26.3	
	2500	25.0	26.5	28.0	
	550 - 900	—	1.1	1.6	
Coupling Flatness(±)	900 - 2200	—	0.4	1.0	dB
	2200 - 2500	—	0.7	1.2	
	550	24	30	—	
Return Loss (Input)	900	22	27	—	dB
	2200	18	25	—	
	2500	18	24	—	
	550	24	30	—	
Return Loss (Output)	900	22	27	—	dB
	2200	18	23	—	
	2500	18	22	—	
	550	12	14	—	
Return Loss (Coupling)	900	11	13	—	dB
	2200	15	18	—	
	2500	16	23	—	
	550 - 1500	—	—	100	
Input Power	1500-2500	—	—	80	W

* Coupling can be used for forward direction only.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB) Out-Cpl	Return Loss (dB) In	Return Loss (dB) Out	Cpl
550.00	0.11	26.54	14.85	47.09	49.80	13.72
1000.00	0.18	24.16	10.22	48.53	42.65	14.44
1500.00	0.24	24.13	7.13	43.44	35.29	14.80
1900.00	0.29	24.37	5.10	39.39	31.40	15.01
2000.00	0.30	24.54	4.57	37.37	30.35	15.70
2100.00	0.31	24.79	4.01	35.72	29.46	16.64
2200.00	0.32	25.16	3.43	33.62	28.29	17.61
2300.00	0.32	25.65	2.81	31.93	27.53	18.52
2400.00	0.33	26.23	2.19	30.52	26.90	19.41
2500.00	0.33	26.79	1.63	29.04	26.09	20.55

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